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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,632	01/09/2002	Hyun-sook Kang	Q65113	3030

7590 05/24/2006

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EXAMINER	
LIOU, JONATHAN	
ART UNIT	**PAPER NUMBER**
2616	

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/040,632	KANG ET AL.	
	Examiner	Art Unit	
	Jonathan Liou	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

During the phone conversation on April 14, 2006 with representative of applicant, Marlene Drohan, the non-compliance issued on April 11, 2006 will be withdrawn with new due date three month shorten statutory from the mailing date of this office action.

Response to Amendment

This office action is in response to applicant's paper filed 01/18/2006. Claims 1-18 are currently pending in the application. Claims 1-15 stand rejected and claims 16-18 are allowed in this office action.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rune (**US Pub. 2001/0002906.**), in view of Yoshiyama (**US Pat. 5,461,608.**)

3. As per claims 1-3, 6-7, 10, and 13, Rune teaches a wireless communication apparatus, system, and method (**Fig. 6, Rune**) comprising:

A transceiving unit for receiving and transmitting data (**Radio unit 601, Fig. 6, Rune**)

A controller (**It could be interpreted as link control unit 602 and CPU 603 in Rune's system. Fig. 6**) for analyzing a destination of a packet received for a certain period of time (**Rune teaches analyze the header of the packet and IP header could**

include the destination of a packet. See sec [0031], [0035], [0037], and [0069], Run.) In addition, Rune teaches above systems could be implemented as the master unit (**Fig. 7, sec [0006], Rune.**) and connected to a host via communication interface (**Fig. 6, Rune.**) Rune also shows a memory for storing the packet status of the wireless communication (**Fig. 6, Rune.**)

Rune does not specifically teaches detecting an amount of slot usage according to the destination and selecting a temporary master device according to the amount of slot usage, and transferring a role of master to the selected temporary master device recited in claim 1. However, Rune teach detecting the destination (**Rune teaches analyze the packet data, and also teaches the packet could hold different timeslots. Therefore, different packet with different destination would have different amount of slot usage and need to be analyzed as well. See sec [0004], [0010], and [0057], Rune.**) Packet/multipacket length could also often be considered as slot usage. In other words, the different destination would be assigned the different channel. Some channels would using multi-timeslots and the other would only using single timeslot (sec [0004], Rune.) Thus, it would have been obvious to one who has ordinary skill in the art at the time invention was made to detect an amount of slot usage according to destination because Rune teach detecting destination (sec [0057], Rune) and using different timeslots (sec [0004], [0010], Rune.)

Further, Yoshiyama teaches choosing a temporary master device according to the priority of the packet data in place of the master node (**col 2, lines 58-59, Yoshiyama.**) The amount of slot usage could definitely be the factor of priority because

the amount of slot usage means how much of bandwidth to use. This would be desired as considered of priority because more bandwidth would be more efficient.

Rune also teaches at least one slave device connected with the master device (**Fig. 7, Rune.**), if selected as the temporary master device, the slave device taking the role of master from the master device and acting as the temporary master device for a predetermined period of time (**col 1, lines 34-59, Yoshiyama.**)

Since Yoshiyama teaches selecting the slave device as the master device (**col 1, lines 34-59, Yoshiyama.**), it would also have been obvious for one who have ordinary skill in the art at the time the invention was made to select the temporary master device from the salves according to the amount of timeslot because Rune also teaches timeslot could be the important factor for efficiency (**sec [0004], Rune**.) and Yoshiyama teaches selecting the temporary master by importance or priority of packet data (**col 2, lines 58-59, Yoshiyama.**)

4. As per claims 4-5, 8-9, 11-12, and 14-15, Yoshiyama teaches selecting the temporary mater device according to the priority of packet data (**col 2, lines 58-59, Yoshiyama.**) Rune teaches the destination of IP header of packet (**Rune teaches analyze the header of the packet and IP header could include the destination of a packet. See sec [0031], [0035], [0037], and [0069], Run.**) The amount of slot usage is considered to the bandwidth could be used. Of course, the higher bandwidth of the device would be selected because it would be more efficient. Hence, the largest amount of slot usage would be obviously selected as temporary master because of the bandwidth consideration. Yoshiyama teaches keep checking if the master would

maintains as the role of master while checking whether slave node having higher priority than the current master (**col 1-2, lines 60-24, Yoshiyama.**) Hence, the master would continuously maintain the role of master device for a certain period of time if the master device were the device that has the highest priority. As taught above, the highest priority could be the largest amount of slot usage due to bandwidth consideration. Following the same rationale and basis as applied to claim rejections 1-3, 6-7, 10, and 13 above, it would have been obvious for one who have ordinary skill in the art at the time the invention was made to select master device according to the largest amount of slot usage and the master device would maintain the role of master if the master device has the largest amount of slot usage because the larger slot usage means more bandwidth could be used and thus selecting as the temporary master according to the largest amount of slot usage would be desired. In addition, Yoshiyama teaches selecting temporary master according to the priority of packet data (**col 2, lines 58-59, Yoshiyama.**)

Allowable Subject Matter

5. Claims 16-18 are allowed.

6. The following is an examiner's statement of reasons for allowance: Cited prior art, Kumar et al. (**US Pat. 6,657,987**), teaches initializing a number of slot usage according to slave devices and receiving a packet from the slave devices connected to a piconet. Cited prior art, Rune (**US Pub. 2001/0002906**), in view of Yoshiyama (**US Pat. 5,461,608**), teaches and suggests performing the functions of step (c) through (e). However, None of cited prior art teaches or suggests initializing the number of slot

usage according to a destination recorded in the packet, and increasing the number of slot usage according to a destination recorded in the packet in the related art of a wireless communication method for selecting a temporary master device.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

7. Applicant's arguments filed on 05/02/2006 have been fully considered but they are not persuasive. Applicant argues Rune fail to detecting an amount of slot usage according to destination. However, Rune teach detecting the destination (Rune teaches analyze the packet data, and also teaches the packet could hold different timeslots. Therefore, different packet with different destination would have different amount of slot usage and need to be analyzed as well. See sec [0004], [0010], and [0057], Rune.) Packet/multipacket length could also often be considered as slot usage. In other words, the different destination would be assigned the different channel. Some channels would using multi-timeslots and the other would only using single timeslot (sec [0004], Rune.) Thus, it would have been obvious to one who has ordinary skill in the art at the time invention was made to detect an amount of slot usage according to destination because Rune teach detecting destination (sec [0057], Rune) and using different timeslots (sec [0004], [0010], Rune.)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Liou whose telephone number is 571-272-8136. The examiner can normally be reached on 8:00AM - 5:00PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jonathan Liou 5/2/2006

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER